THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

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AROUND THE LAKES.

CLEVELAND.

The MARINE RECORD has removed to the Leader Building, 144 Superior-st.

Lieutenant Harber, of Arctic fame, paid Cleveland a visit on Tuesday.

The schooner Exile has been sold to Captain Shaw, of Bay City. Consideration, $12,000, cash.

Lieutenant P. H. Ray, of the signal service, was in the city yesterday inspecting the signal station.

The schooner Erastus Corning, laying at Escanaba, with a cargo of ore, has been sold at Buffolo for $22,000, to S. H. Foster and R. Arnold. She will be commanded by Captain Arthur Foster the ensuing season.

Moore & Bartow have sold the schooner James Couch for the estate of Henry Halsted, of Chicago, to Messrs. Duffy & Rourk and Captain Willliam Mack, of Cleveland. Consideration $25,000. The James Couch has a registered tonnage of 843.84.

A lighter broke away from its moorings in the river Tuesday night, and floated out into the lake as far as the ice would permit. It struck the docks at several places and damaged them slightly. The lighter was recovered yesterday by a tug.

Captain Webquish, the Indian pilot, and whom everyone connected with marine business had a high regard for, was buried on Tuesday from his residence on Courtland street. He was a victim of appoplexy, this being his second attack. Captain Webquish had been engaged as master of the tug Dreadnaught.

The annual meeting of the Cleveland branch of the Chicago Seamen's Union was held in the rooms on East River Street. The only business transacted was the election of officers. President Lynch and Mr. John Moore were candidates for the presidency, but President Lynch was reelected unanimously. The other officers elected are as follows: First vice president, John Hughes; second vice president, L. A. Sweeney; secretary, Christopher Mackin.

William Larkin began suit in the Common Pleas Court Saturday against Thomas Murphy, of the schooner Harvey A. Bissell. Larkin was ship keeper on board the Fred. A. Morse last summer, and as such was obliged to make his home on the vessel. He says that the Morse was lying near the Cleveland & Pittsburg railway docks, when the master of the Bissell asked leave to tie up between their boat and the wharf. This request was granted, but Larkin says the crew on the Bissell left her hatches open, and that when he attempted to cross over from the Morse to the docks in the night, he fell into the hold and was terribly injured. He asks the court to give him judgment in the sum of $1,000.

The Civil Engineers' Club held its fourth annual meeting at the Windsor Club rooms on Tuesday. The following officers were elected for the ensuing year: President, J. F. Holloway; vice-president, B. F. Morse; corresponding secretary, A. Mordecai; recording secretary, M. W. Kingsley; assistant recording secretary, F. C. Bate; member of the board of managers of the Association of Engineering Societies, M. E. Rawson; Treasurer, G. A. Hyde. In his annual address President Holloway reviewed the progress of the club during the past year, showing that it is in a very prosperous condition, with a membership of one hundred and twenty-four, nearly all of whom take great interest in the regular meetings; that the financial condition was good. The local engineering events were noted, in his address, consisting of the completion of the breakwater, the commencement of work on the new reservoirs and the projected opening of the old river bed by ship channel into the outer harbor.

BUFFALO.

Special to the Marine Record.

The American Ship Windlass Company will furnish, through their agents, Messrs. D. S. Austin & Co., ship chandlers here, a windlass and capstan for the steamer building at the Union Drydock Company's shipyard for Ash & Danforth; also a steam capstan windlass for the steel steamer building by the same company for the Union Steamboat Company, and a windlass and capstan for the steamer building by R. Mills & Co., for Captain Cummings.

Captain S. B. Grummond and Captain S. Murphy, both of Detroit, paid a visit to this city last week.

Charles Eldred, Charles Hester, and S. C. Cummins, of Chicago, were in the city last week.

Mr. Louis Dimick has returned from a five weeks' visit to Cuba, where he has been with his brother, Lorenzo Dimick, agent of the Continental Insurance Company. The latter is at the Windsor hotel, New York, much improved in health.

Smith & Davis have chartered their steambarge Coffinberry and towbarge H. R. Newcomb to carry iron ore from Escanaba to Chicago for the next three seasons, p. t.

W. W. Tyler sold the schooner Sam Flint to C. Eldred, of Chicago, for $15,000.

The steambarge Huron City, owned by Tyler & Galvin, is getting extensive repairs done to her hull and boiler.

Captain R. F. Parsons, who commanded the Huron City last season, will next season command the Alpena, and will tow the barges Flint and Wenona in the Lake Superior trade.

Captain T. Wilson, of Cleveland, and W. Eagan, of Chicago, were in this city on Friday last.

Messrs. Whiton Bros. & Co., of Boston, have patented a new torchlight which must prove of very great advantage to mariners, and will no doubt entirely take the place of the old method of lighting the swab by the use of matches, etc., which wasted so much valuable time in the hour of danger. The new torchlight comprises a five chamber Winchester repeating revolver, the barrel of which is put through a hole on the outside and fastened with a nut on the inside of the of a can containing turpentine, the handle of the revolver forming a handle for the cover. A swab which reaches to the bottom of the can, by means of a piece of wire, is affixed to the cover of the can inside. The barrel of the revolver, which is loaded with No. 32, short blank cartridges, points in a direct line to the swab, and as soon as the cover is removed from the can and the trigger is pulled the charge from the blank cartridge immediately ignites the swab. Messrs. Howard H. Baker & Co., ship chandlers, are the sole agents at Buffalo for the new torchlight, and will sell it with can, swab, revolver, and fifty No. 32 short blank cartridges complete for $4. A large number of vesselmen have called on them during the past week to see the new torchlight tested and they all speak greatly in its praise and say it is the best means of obtaining a light ever invented, and will supply a want they have long required. Messrs. Whiton Bros. & Co., of Boston, have sold several hundred of them during the short time they have patented the torchlight, to vesselmen for use on the sea.

D. Caldwell, vice-president and general manager of the Western Transit Line has made the following appointments: Edward L. Kimberly, cashier, Buffalo; P. P. Miller, superintendent of repairs and machinery, Buffalo; Theo Vosburg, freight agent, Buffalo; M. W. Cole, chief steward, Buffalo; G. L. Douglass, agent, New York; J. L. Gilmore, agent, Boston; T. N. Bond, agent, Chicago; G. M. Tibbitts, agent, Milwaukee. Agents at Cleveland and Detroit will be appointed hereafter.

In April last a libel was filed by Felix Larigne against the propeller Ontonagon for services rendered as engineer. After the answer was filed and the boat bonded the owners settled with the claimant. An action is now brought by the proctors for the libel to determine whether the claimant has the right to settle with the parties upon whom the claim is made, and thus avoid payment of clerk's marshal's and proctor's costs. The case will come up before Judge Cox at Utica.

DETROIT.

Special to the Marine Record.

DETROIT, March 12.

The most important item of news I send you with this correspondence, and which will interest your many readers in several lake cities, is the invention of a smoke consumer, destined to do away with the smoke nuisance so much complained of at Chicago, Detroit and other places. That it will prove a success there is no reason for doubting. It was gotten up by A. Backus, Jr., of the firm of Backus, Bros., of Detroit, who carry on extensive planing works. In explaining its *modus operandi* I cannot do better than to give it in Mr. Backus' own words as related to a reporter in this city. "The fuel being fed through a shute or hopper into a furnace, the whole width of the boiler, is met by a current of air at the point where combustion takes place, giving a closer intense blaze. There being no door to the furnace, no cold air is allowed to strike the boiler or flue, to suddenly contract and thus injure them. Besides the danger of explosion is reduced to the minimum, and one furnace can feed a battery of six boilers with ease. The annihilation of the smoke nuisance is an established fact, practical and economical."

Messrs. Morgan & Rice, vessel brokers, of this city, have just sold the schooner Mary Hattie to Captain E. B. McKay, of Sebewaing for $3,500.

The schooner Star of the North, recently purchased by Captain J. W. Surles and others, has been sold to Captain Davis, of Port Huron. Consideration $1,200.

Captain H. G. Blanchard, of Detroit, has purchased the tug Bismarck at Chicago. The price is stated to be $10,000.

The steamer Algomah, so long imprisoned in the ice at Mackinaw, has finally been released and taken to dock, where her new wheel is being placed in her.

Captain Dan Ingraham, of Painesville, O., is a recent visitor here, and Captain Hiram Estelle, whose genial countenance has not put in an appearance here for some time past, showed himself up from the far distant west, where he has been seeking fields and pastures new.

Morgan & Rice have received the agency of the Fireman's Trust Co., of New York, for the year 1884.

The schooner John Stevenson has been raised above the surface of the water sufficient to determine the nature of her injuries caused by being run into by the steamer Great Western, referred to a short time since. They are of such a character as not to warrant a rebuild.

The propeller Atlantic, of Grummond's line is having a new mast placed in her.

The tug O. Wilcox, owned by A. Cheesebrough, Esq., is being thoroughly overhauled and placed in first-class condition.

Marine painting is becoming one of the leading arts of the times, and many paintings recently placed on exhibition show a high order of skill. A painting is at present to be seen in the window of a leading establishments here, giving a view of the tug Torrent as she appeared in a terrible gale last fall on Lake Huron, with a large vessel in tow, which, despite the perils of the occasion for many hours, was brought safely into the rivers. The painting was executed by Mr. S. A. Whipple, and cannot be rivaled, no matter what others may say to the contrary.

The St. Clair Navigation Company has entered a suit in the United States District Court here against the Merchant & Trader's Bank, of New York, for $5,000. It appears to have originated as follows: Last spring the propeller James Davidson, the property of complainants, was insured for $45,000 in several companies, the Merchant & Trader's holding $5,000 on her. The steamer, it will be remembered, was wrecked in October last on an island in Lake Huron, while on a voyage from Buffalo to Duluth with a cargo of coal, and was a total loss. All the other companies paid up but the Merchant & Trader's, hence the suit.

Another admiralty suit has just terminated in the same court here. It is a suit which has been on the boards for some weeks past, an outline of which was furnished you in a former issue, relative to the propeller Jay Gould vs. the tug Martin Swain. The facts were presented to the court as then described and it seemed that a brief conference was all that was necessary to determine the case, especially when it is known that the court was provided with two marine experts to aid in arriving at a correct decision, and on whose opinion, presumably, it chiefly relied, yet the decision was that both steamers were at fault, and the matter was referred to a master to assess the respective damages. Notwithstanding all this, the country is safe.

Captain Harry Whitaker, whose serious illness was noted in last issue, is still hovering between life and death

Captain George Foster, who has been dangerously ill with lung fever, in this city, is in a fair way to recover.

The Lake Superior Transit Company have not as yet given out the appointments to their steamers for the coming season, as I am informed by Mr. Whiting, the gentlemanly agent in this city.

A heavy rain storm set in last night, followed to-day by warm sunshine, expressive of on April day, with the complete removal of sleighing, and clean side walks, for the first time during the year 1884. With a brief continuation of such weather it will not be long when the sound of the calking mallet will be heard in the various shipyards,

[*Continued on 5th page.*]

MARINE LAW.

Prepared for the Marine Record.

On the 25th of November, 1882, a libel *in personam* was filed in the United States District Court by W. E. Chapman, Charles V. Olds and Selina Graham, owners of the schooner A. J. Rogers, against the Dalliba Iron Mining Company for breach of contract of charter party. The contract was made between W. E. Chapman, of Sandusky, O., as managing owner of the Rogers, and J. H. Dalliba, of Cleveland, as agent, for whom it may concern, on the 10th day of January, 1882, and provided as follows: That the said vessel should carry seven or more cargoes of iron ore for the said J. H. Dalliba, agent, during the season of 1882, from L'Anse or Marquette, shipper's option, to any of the following ports at a rate of freight of $1.90 per ton of 2,240 pounds, the shippers to have the privilege of consigning each or any cargo, or all, to either of the following ports, viz.: Detroit, Toledo, Sandusky, Black River, Cleveland, Fairport, or Ashtabula, said vessel to have privilege of taking up cargoes. It was further mutually understood and agreed by the terms of the contract that the said vessel should continue to carry ore for the said J. H. Dalliba, agent, as aforesaid, for that entire season of navigation, at the above named rates, said vessel to make as many more than seven trips as possible. There was allowed four days' time for loading said vessel, and for furnishing a dock at which to discharge, the time to be reckoned from the hour when said vessel reported and was ready to load, until loaded; and from the time when reported at port of destination, and was ready to unload, until dock was furnished; the time of such reporting in both cases not to date from an hour earlier than 8 o'clock, a. m., or later than 5 o'clock p. m., Sundays, public holidays, and time lost in consequence of heavy seas, strikes, or any other cause beyond the control of the mining companies, excepted. When each cargo contracted by this vessel is delivered, if it shall be found that the total time of detention exceeds the four days for trip, as above stipulated for, the said vessel to be allowed a compensation for further detention, except for causes above stated, at the rate of six cents per gross ton of cargo for each day (of twenty-four hours) of such excess. The time of reporting ready to load, and when loaded with cause of detention, if any, to be noted on the bill of lading in every instance. A special order for each cargo to be obtained from the said J. H. Dalliba, agent, at Cleveland.

The libellants, Messrs. W. E. Chapman and others, claim that Mr. J. H. Dalliba acted as agent for the Dalliba Iron Mining Company. The company answered, making a general denial, and upon the trial of the case the court, Judge Welker, rendered a decree for the libellants, Messrs. W. E. Chapman et al., and reported the matter to Earl Bill, Esq., commissioner, to ascertain and report to the court the amount of the damages sustained by libellants by reason of the breaches of the contract. The commissioner has filed his report in which he assesses the damages at $1,610.69 with interest from certain days as explained in the report. The following is the report of the commissioner in full:

In the District Court of the United States for the Northern District of Ohio, eastern division.

W. E. Chapman, et. al., libellants, vs. Dalliba Iron Mining Company, respondents. } In Admiralty.

The undersigned commissioner, to whom the above entitled cause was by said court referred to take testimony and ascertain and report to the court the amount of damages sustained by said libellants by reason of the matters set forth in their said libel, now comes and submits his report as follows, to-wit: Said commissioner has at sundry times been attended by the counsel of the respective parties and by their witnesses, whose testimony, by agreement of counsel, was not reduced to writing. After hearing said testimony and the arguments of counsel thereupon, said commissioner finds as follows:

On the 10th day of January, 1882, libellants, by W. E. Chapman, managing owner of the schooner A. J. Rogers, entered into a contract in writing with J. H. Dalliba, as agent for respondents, (said contract being the foundation of the present action) for the transportation of iron ore by libellants' vessel, the said A. J. Rogers, from the port of L'Anse or Marquette (Lake Superior) to either of the following ports, viz.: Detroit, Toledo, Sandusky, Black River, Cleveland, Fairport or Ashtabula, at the rate of $1.90 per ton of 2,240 pounds, and said service was to include the entire season of navigation of the year 1882. By the terms of said contract said libellants bound themselves that by their said vessel they would carry seven or more cargoes of ore for respondents during the season, and as many more as possible, with the privilege of taking "up cargoes." It was also stipulated that for the loading of said vessel as also for the furnishing a dock at which to discharge her cargo, four days time should be allowed, to be computed from the hour when she should report as ready to load, until loaded, and from the time she reported at port of destination, ready to unload until a dock was furnished; in both cases the time of reporting not to date from an hour earlier than 8 s'clock a. m., nor later than 5 o'clock p. m., Sundays, public holidays and time lost in consequence of heavy seas, strikes, or other causes beyond the control of the mining companies, excepted. For any detention of said vessel for a period greater than as above provided for, libellants were to be allowed a compensation at the rate of six cents per gross ton of cargo for each day of twenty-four hours for such excess. The time of reporting ready to load, and when loaded, with causes of detention, if any, to be noted on the bill of lading in every instance. It was further provided that a special order for each cargo should be obtained from said Dalliba, agent, at Cleveland. On those terms said Dalliba, agent, agreed to employ said vessel and pay freight as stipulated.

Such being substantially the terms of the contract by and betwoen the parties it is shown in the evidence that libellants evinced their readiness to enter upon its execution on the 18th day of May, 1882, on which day the master of said vessel applied to said Dalliba for and received an order for a cargo of iron ore, and the vessel proceeded to Marquette, where she was duly laden pursuant to said order on the 27th of the same month, and transported her cargo to Cleveland, that being the port of her destination, where she was duly unladen and her freight charges paid according to the terms of said contract. A second trip was in like manner performed according to the terms of the contract; but said vessel having reported at Marquette "ready to load," at 9 o'clock, a. m., on the 21st of June, such delays occurred that her lading was not finished until 3:50 o'clock p. m., on the 29th of the same month, whereby a just claim for demurrage accrued to libellants, under their contract, for four and eleven-twenty fourths days in excess of the four days allowed therein on her cargo of 645 tons at six cents per ton per day, amounting to $172.54. Saving and excepting the two cargoes above mentioned respondents failed and refused to give any orders to their agents at or near their mines at Marquette or L'Anse to libellants or their agents in charge of their said vessel, as by said contract, they were bound to do; and libellants proceeded to employ their vessel in like trade at such rates of compensation as they could procure, which are found to have been the best that the then state of the market allowed, performing the remainder of the season four additional trips from Marquette to Cleveland laden with iron ore by parties other than the respondents, to-wit:

No. of Trips.	T'ns	Rate fre'ht	Amt. Rec'd.	Amt. at contract rate	Difference.	Date of delive'y 1882
Third...	642	$1 20	$770 40	$1219 80	$449 40	Aug. 5.
Fourth.	630	1 25	787 50	1197 40	409 50	Sept. 6.
Fifth ..	617	1 25	771 25	1172 30	401 05	Oct. 14.
Sixth...	594	1 60	950 40	1128 60	178 20	Nov. 11.
Totals...	2483		$3279 55	$4717 70	$1438 15	

Thus libellants' vessel transported for other parties than respondents during the season of 1882, 2,483 tons of iron ore for the compensation of $3,279 55, being compelled thereto by the refusal of respondents to continue to furnish orders for ore as by their contract they were bound to do; whereas, had the same service been performed at the contract rate of $1.90 per ton, libellants would have been entitled to demand and receive the sum $4,717.70; and the difference between said two sums is the measure of their damages in that behalf, viz.; the sum of $1,438.15.

It is that claimed by counsel for libellants that they are entitled to recover from respondents, as damages, certain profits which might have been made had their vessel been able to perform another voyage or trip at the contract rate so as to have completed the seven trips therein mentioned. Respecting this claim it is pertinent to observe that by the terms of said contract the carrying seven or more cargoes of ore was the undertaking of libellants; (see 2d and 4th paragraph of contract.) If by reason of any act of respondents, libellant's vessel was rendered incapable of performing this part of the agreement, doubtless a legal liability for such damages as were actually sustained would result. But there is no proof of any such act excepting the failure to furnish orders for her employment after the making of her second trip should be so regarded. Before setting this down as the true cause it is well to ascertain whether the failure to receive orders from respondents worked any delay of the vessel whereby she was compelled to lie idle for any considerable time during the remainder of the season. The average time consumed in making the round trips carrying said two cargoes under the contract was twenty-five days, say from the date of procuring the orders at Cleveland, to the return and delivery of cargo. For the remainder of the season the average of the four trips was thirty-one days each; the apparent loss for the four trips as compared with the first two being twenty-four days. It also appears that on every one of said trips libellants availed themselves of their contract privilege of taking "up cargoes." It does not appear that libellants experienced any delay in procuring orders for either of said four cargoes. If any such existed it would have been known to the master of their vessel, whose deposition is on file in this case. Such delays as were incident to the loading and unloading of the ore denominated "demurrage" amounted to but twelve days in all. The excess over the "four days" for which compensation was provided was six days. For one and a half days thereof payment was duly made, and for the remaining four and a half days due allowance is made in this report at the rate named in the contract. The witness, Reimer, master of said vessel, when asked "How much delay did the vessel experience, how many days' delay, all told, during that season, if any?" replied: "I don't know. I didn't figure it up, but I think about thirteen or fourteen days." It will be seen that of the number thus estimated twelve days delay are accounted for which is probably the true number. Even the fourteen days guessed at by the witness are insufficient to have enabled the vessel to perform the seventh trip to Marquette and return. In accounting for the vessel's liability to make "seven or more" trips it is pertinent to state that not only did libellants on every occasion carry "up cargoes" but on one occasion she went to Lorain for a cargo of coal destined to and delivered at Lake Linton, a place seventy to seventy-five miles from Marquette. On another occasion she went from Cleveland to Ashtabula for a similar cargo. Three and a half days were also spent in the repair of libellants' vessel.

If, in every instance libellants had seen fit to take up cargoes from and to still more distant points, and to have spent additional time in making more extensive repairs of their vessel than warrant therefor in said contract, and their neglect thereby to hold respondents responsible for the loss of the profits of a seventh trip would have been substantially the same, and its justice hardly less.

It is also found from the testimony that by the mutual agreement of the agents of the respective parties, application for a first order for a cargo of ore was deferred until the 18th day of May, whereas the season of navigation commenced at an earlier period; orders having been issued by the Republic Iron Company as early as the seventh of April to three vessels, to one on the 19th, and to two others on the 26th of the same month, five of which vessels received their cargoes at Marquette as early as the 5th of May. By such mutual arrangement the parties must be held to have waived whatever rights and obligations were involved in the contract touching service and employment of libellants' vessel for "the entire season of navigation," and the carrying of "seven or more cargoes;" and more than a month of the entire season was spent by libellants' vessel either in voluntary idleness or in some service not named in the contract.

In view of all the foregoing facts the undersigned finds that libellants are not entitled to recover the supposed profits of the said seventh trip. But lest it may be determined by the court that in this respect the finding and conclusion of the commissioner is erroneous, to save the expense of a new reference, and for the information of the court, it is found and estimated that said supposed profits amount to the sum of $552.43.

The whole amount of the damages sustained by said libellants by reason of the matters in said libel set forth, found and assessed by said commissioner are as stated below, to wit:

RECAPITULATION.

1st. Loss on freight, 3d cargo	$449 40
Interest from August 5, 1882, 4th cargo	409 50
Interest from September 6, 1882, 5th cargo	401 05
Interest from October 14, 1882, 6th cargo	178 20
Interest from Nov. 11th, 1882, for demurrage on 2d cargo	172 54
Total	$1,610 69

It is therefore found that said damages amounted to said sum of sixteen hundred and ten dollars and sixty-nine cents, with interest on the foregoing several sums from the several dates affixed to each, to the date of the final decree in this cause.

Respectfully submitted,

EARL BILL, Commissioner.

This case will probably come up for confirmation of the report and final decree some time during the present month. Messrs. Mix, Noble & White appeared as proctors for the libellants, and H. D. Goulder for the company.

GENERAL NEWS.

Pensacola, Florida, claims to be the oldest city in America.

Over 125,000,000 bushels of wheat are available for export.

The production of the Lake Superior copper mines for 1883 was sixty million pounds of copper.

It is reported that a fresh Dutch expedition has been despatched to Acheen, Sumatra, with the hope of securing the release of the crew of the wrecked steamer Nisero.

It is announced that great stagnation exists in shipping interests upon the Tyne. One hundred and twenty-four vessels are idle, and 1,560 men are out of employment.

In accordance with instructions telegraphed from Washington all bosses, clerks and men employed in the construction department of the navy yard Portsmouth were discharged.

The estimated log product of the Au Sable river for the present season is 145,850,000 feet new crop, with 95,000,000 feet of old stock. It is believed that at least 50,000,000 feet of this will be carried over into 1885.

The American Ship Windlass Co., of Providence, RI., are making ten sets of Winter's Patent Wharf Drop gearing for the pier now being fitted up by the Morgan Line at New York, as also two sets for the Central Wharf in Boston.

The steamship Decatur H. Miller, from Baltimore for Boston, passed Highland light on the morning of February 28, during a thick fog, but announced her name to the signal officer with her steam whistle, by code previously arranged.

At a meeting of the San Francisco Chamber of Commerce resolutions were adopted protesting against the proposed action of the government to confiscate all duty paid on merchandise. A memorial has been telegraphed the Secretary of the Treasury requesting a delay of ninety days.

The House Committee on Naval Affairs has appointed Representative Buchanan, McAdoo, and Routelle a sub-committee to investigate the management of the Jeannette expedition in accordance with Mr. Washburn's resolution. The sub-committee is authorized to ask power from the House to call for persons and papers, and have the expenses paid out of the contingent fund.

Before leaving San Francisco for Sidney, Australia, Hanlan offered to back James Seeley, a California sculler, for $500, to perform more clever tricks while in his boat than any other oarsman in the West. Seeley performs such tricks as rowing a shell less than twelve inches wide while standing on feet, then standing on his head. He also swings Indian clubs and performs many other tricks requiring great steadiness of nerve and balance.

The Dominion Cabinet Council passed an

order Saturday to purchase a sailing vessel at once and send an expedition to explore Hudson's Bay. A large gang of men will be sent out. They will be deposited in small parties at different points along the straits for that purpose of taking observations. They will be supplied with provisions sufficient for two years. Reports will be sent in early and frequently. The expedition will cost $150,000.

Orrin Merrill, Oriskany, has begun suit against the canal and steamboat company to recover $20,000. In October last Merrill was a passenger on the canal packet Lewis Lawrence from Utica to Oriskany and while passing the steamboat Jupiter owned by the defendants the valve of the "surface blower" was carelessl y opened, letting the hot water and steam escape and discharge itself in the Lawrence. The steam and water struck the Merrill boy on the abdomen, thighs, legs and other parts of the body, burning and scalding him so badly that he was confined to his bed for several weeks.

Captain M. Smith, of the British steamship James Turpie, who arrived at Baltimore February 28, from Algeria, states that on February 23 the steamer entered a hurricane that lasted twelve hours, during which he filled two canvas bags with fish oil, lowered them from the vessels bow, so that the oil would ooze from the bags and mingle with the seas. A good result was perceptible almost immediately. It quieted the waters, and Captain Smith says that he believes it saved the ship from having her decks swept fore and aft. Captain Norvall, of the steamship British Crown, which arrived at Philadelphia on February 26 from Liverpool, reports that the vessel experienced dreadful weather and tried the experiment of hanging over the ship's side canvas bags filled with oil, and found it to work well. It prevented the seas from breaking over the vessel.

Messrs. Allison White, of Philadelphia, and Charles F. Mayer and S. S. Lee, of Baltimore, appeared before the House Ways and Means Committee in opposition to the placing of bituminous coal on the free list. It was asserted that such action would be seriously felt in the interior of this country, because foreign coal would not be very hurtful along the coast. On the domestic article there was a margin of only 15 or 20 cents on the ton, and taking off the present duty would have the effect of closing the mines of this country. Even reducing wages would not be beneficial. All the speakers declared that they could not understand why this particular interest had been singled out, and inquired of Chairman Morrison from what source the agitation to put this coal on the free list emanated. No reply was given, however. In conclusion it was demonstrated by statistics that the United States paid higher wages to its miners than the provinces of England.

TRIPLE THERMIC MOTOR.

The announcement is made of the discovery of a new remarkable motor known as the "Triple Thermic Motor." The new motive power is the vapor of bi-sulphide of carbon. It has been in practical use, driving a sixty-horse power engine in the cement paving manufactory on West Forty-sixth street, New York. The discoverer of this means of applying the new power and inventor of the machinery adapted to its use is W. S. Cowell, formerly of Pittsburg, who, it is claimed, has been at work many years on the application of the same material from which vapor is generated. Bi-sulphide of carbon is a discovery of the last century. The force and power of the vapor in its application far surpasses that of steam, and its application and regulation is already under more perfect and safe control than steam. The invention or discovery consists in evolving bi-sulphide of carbon into a vapor for operating machinery by generating heat into a generator and transferring into a vessel conlaining bi-sulphide of carbon. The latent heat of steam is utilized to convert the bi-sulphide of carbon into vapor, only 118 degrees being necessary to produce this vapor. A prominent engineer of Chicago, giving the result of his examination of the motor, says: "I saw a fifteen-horse power boiler with a very little fire under it generating steam which generated the new motor, which in turn ran an engine of sixty-horse power." A syndicate has been formed which controls the invention of all patents, with a capital stock of $25,000,000, of which $8,000,000 has already been realized on the stock. Ex-Governor Hubbard, of Texas, and ex-Collector Baird, of Boston, are mentioned as being largely interested in the new motor syndicate.

The MARINE RECORD has removed to the Leader Building.

Geo. B. Carpenter & Co.,
Ship Chandlers and Sail Makers.

Ship Chandlery Goods of all Descriptions.

MANILA ROPE OF THE VERY BEST MAKE
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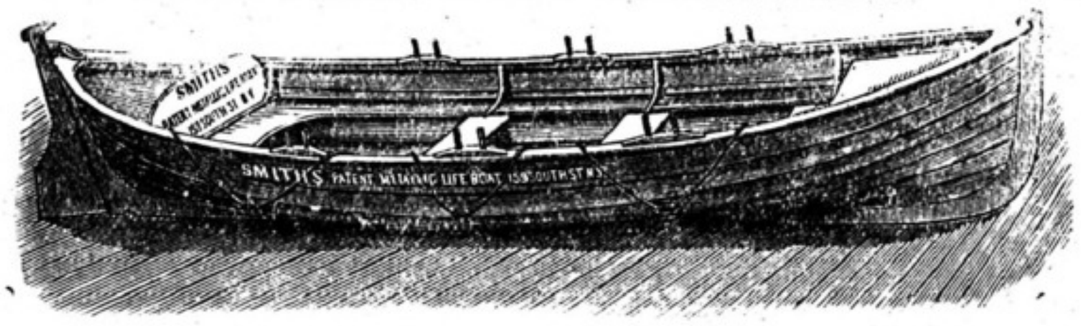

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The House of Representatives has passed a bill which authorizes Cuyahoga county to appropriate the Rocky River toll bridge, the only toll bridge in the State, and make it free. The bill should receive favorable and speedy action by the Senate.

TEN bids were received last Saturday by Captain Davis, lighthouse engineer, for the construction of the two new towers soon to be erected at the mouth of the Detroit river and Sand Beach. The lowest bid was from the Russell Car Wheel Company and it was forwarded to Washington with the recommendation that it be accepted.

MR. CHAMBERLAIN, who is the author of a bill for the better protection of life and property at sea, and which is now before parliament, is getting into deep water with British shipmasters, who threaten to transfer their vessels to a foreign flag in case the bill passes. We are pleased to know that they cannot float the stars and stripes over them, however, which is probably the only good thing that comes of the refusal of registry to foreign built ships.

THE advent of a new paper devoted to the iron interests is a matter of some moment at this particular time, especially when it is found advocating sound views for the good of that industry. We are pleased to see that the Iron Review and Industrial Age, published by Homer E. Dudley & Co., has just been started at Buffalo. It is a monthly, and from the prosperous appearance of the first number, we judge that it has come to stay.

THERE are indications that the objectors will be present in Washington in force, to oppose the extension of the patents on the steam grain shovel. Arguments for and against the bill, which is in the interest of the inventors, Neilson, Spendalow and Watson, of Buffalo, will be heard before the Senate committee on patents to-day (Thursday.) The patents have been extended several times and the grain carrying and grain-handling people think they have paid sufficient royalty.

WE have received the new catalogue of the Penfield Block Company, which illustrates the merits of their goods as fully as it is possible to do, and includes a full line of Anchor Brand tackle blocks and trucks manufactured by this firm, and also a line of specialties, such as lock faucets, mallets, baggage barrows, etc. A particularly novel feature of it is the introduction, on pages 48 and 49, of a complete cipher telegraph key, and this, in connection with the names given to many articles individually, makes the ordering of goods by wire as inexpensive and expeditious as possible. Parties who deal in or use these goods will be cheerfully supplied with a copy of the catalogue upon application.

TARIFF AND PRESIDENT MAKING.

There is some reassuring news floating about in political circles concerning the Morrison tariff bill. From evidence gleaned here and there, and especially from ore and iron men themselves, the country is not ready for free ore or free trade in any aspect. But this is what the Morrison bill, being practically a measure for "tariff for revenue only" would bring us to. Our contemporary, the Iron Review, mentioned in another place in this issue, takes an unequivocal position on this question in its first number. It says this country owes its marvelous development within its first hundred years to the protective policy. In many lines of industry we find ourselves almost able to compete with the studied productive economy of countries that have many centuries the advantage of us in experience, but to attempt to compete in all lines with them would be to reduce our scale of wages equal to those of European workmen, to allow them to undersell us in our own markets, and drive large numbers of capitalists out of fields which now employ vast numbers of workmen. "This," says the Review, "would be particularly true of the iron trade, one of the most far-reaching and important in the land."

The effect which the Morrison bill was intended to produce was broad and comprehensive. Its design was nothing less than the making of a president. This was not to be contingent entirely upon its success. It may even be inferred that the bill might eventually have been thrown aside as something for which its projectors could have no use after it had performed this duty. It is stated that a prominent Illinois politician, after worming himself into the confidence of Mr. Morrison, has allowed the inwardness of his scheme to exude, like unto an evaporation too hot to hold within him. Mr. Morrison's hope was to get the tariff measure before Congress, have it debated for a time, the more prolonged the better, lead the press into a fierce discussion of it, and cap the seething climax by getting the Illinois democratic convention to put it into their platform. This he thought would place him quite prominently before the national convention as a presidential candidate. This is as far as our consideration leads us in this direction, as we have no business with politics except as they bear upon vital industrial measures, but it is by no means the end of the edifying story. Now it so happens, for our good, or otherwise, as the reader chooses to construe it, that there is another gentleman in Congress who has presidential aspirations; there may be more, but one is all we have to deal with at present. With the sharp mistrust of a competitor, he sees through Mr. Morrison's plan, and lays a trap for his unsuspecting feet. Randall, an ex-speaker, and a shrewd parliamentarian, is the gentleman who could not afford to let the free-trader get up too much steam in the presidential race with any kind of safety to his own prospects. To cool down Mr. Morrison's fires was also in conformity with Mr. Randall's life-long position as a protectionist, and therefore he could, by doing this, feed his conscience and his ambition at one complacent swoop. It is understood that Morrison became convinced some days since that if put to a vote of the House his bill would be defeated, consequently he does not want it to go beyond the point of being discussed. The opponents have marshalled their forces, and the battle is being fought on this ground, Morrison's aim being to secure discussion, but to prevent coming to a vote, and Randall's to prevent discussion, or, failing in this, to press to a passage. It can readily be seen that Randall has the advantage. In fact it is confidentially asserted that the supporters of the tariff measure are almost afraid to move for fear of being pushed too far. In case of victory Mr. Randall's chances for the Democratic presidential nomination, with some Illinoisian holding views opposite to Morrison's on the ticket with him, it is thought, will be quite hopeful. But as we said before, we have nothing to do with the political aspect of the mater. Our only concern is with the chances of protection against free trade, and under the present aspect of things, no matter what the outcome may be of the war between Randall and Morrison, the likelihood is all in favor of the defeat of the tariff measure.

File your MARINE RECORDS for reference.

RIVERS AND HARBORS, BUT NOT CREEKS.

The creeks are to be left to pursue their meandering courses undisturbed by congressional appropriations, if the committeemen are allowed to have their way in the affairs of rivers and harbors. It appears to be about the only thing on which the committee has made up its mind. One of the members was asked recently, by some one voicing the natural anxiety of the country at large, and a very laudable anxiety it is, considering the length of time Congress has been in session without doing anything on the appropriation bills, how the river and harbor bill was getting along. The answer was that they had fixed upon ten million dollars as the total appropriation. This is a novel idea, too, fixing the total before the requirements are found. The committee men said this amount of money would be divided among the rivers and harbors whose improvement is actually demanded by the necessities of commerce, but that they would not recommend anything for the creeks.

LAKE ONTARIO.

LIGHTHOUSES—EARLY CASUALTIES—INTERESTING DATA.

Special Correspondence Marine Record.

DETROIT, March 12.

Commencing with Ogdensburg, on the St. Lawrence which we purpose designating as connected with the ports on Lake Ontario, there are twenty places where lighthouses are located along the American coast, which does not include several situated on islands, reefs, or of a minor character. Those we specially refer to are at Tibbett's Point, Sackett's Harbor, Oswego, Fair Haven, Big Sodus, Genessee, Oak Orchard, Thirty Mile Point and Fort Niagara, at the entrance of the Niagara river. On the Canadian side twenty-nine lighthouses are established, the more prominent of which are located at Kingston, Belleville, Coburg, Port Hope, Darlington, Oshawa, Whitby, Toronto, Port Credit, Oakville, Burlington Bay, and Port Dalhousie. Genesee, on the American side, lies eighty miles from the Niagara river. Oswego is the most prominent commercial point on the American coast. Sackett's Harbor, forty-five miles from Oswego, was, during the war of 1812, an important naval and and military station and the rendezvous of the American fleet. There are also Chaumont Bay, Cape Vincent (head of the St. Lawrence), Clayton and Alexandria Bay.

The first steamer to run down the St. Lawrence was the Lord Sydenham in 1840. She was built at Kingston in 1839.

The most serious casualty happening on that lake at an early period was the loss of the brig Speedy in 1806 with all on board. She was in command of Captain Thomas Paxton and was en route from Frontenac (Kingston) to Little York (Toronto), with court officials, including judge, jury, crown officials and litigants to hold a term of court at the latter place. As she was never heard of after her departure it was presumed that she foundered. Other casualties of note by which lives were lost may be cited as follows:

1798—Schooner Washington foundered with eight lives.

1806—Brig Speedy foundered and all lost, twenty-five lives; schooner Waterbury foundered and all lost, eight lives.

1848—Schooner Ellen foundered with all hands, eight lives.

1851—Steamer Cornet exploded, eight lives lost; schooner Christina capsized and all lost, eleven lives; schooner Wm. Penn capsized and three lives lost.

1852—Schooner Anawan capsized and five lives were lost.

1853—Steamer Ocean Wave burned, twenty-three lives lost.

1854—Schooner Adelia foundered and five lives lost.

1855—Schooner Emblem sunk by collision, five lives lost.

1856—Propeller Finto burned and all lost, eighteen lives; propeller J. W. Brooks foundered and all lost, twenty-two lives.

1857—Steamer Montreal burned (St. Lawrence,) 264 lives lost; brig Iceberg foundered and all lost, seven lives; propeller Inkerman exploded and three persons were lost.

1858—Schooner Ida May foundered, two lives lost; tug J. H. Bloore exploded, three lives lost.

1860—Barque Tornado foundered and all lost, ten lives.

1862—Propeller Bay State foundered and all lost, twenty-two lives; schooner Mary foundered and five lives lost.

1863—Steamer Clyde exploded and three lives were lost.

1866—Schooner M. Ballard foundered, nine lives lost.

1867—Propeller Wisconsin burned, all lost, fifty lives.

1868—Schooner B. Doran foundered, six lives lost; propeller Perseverance burned, fourteen lives lost.

1869—Schooner Mary O'Gorman foundered and eight lives lost.

1870—Tug Tornado exploded and killed three; schooner Jessie foundered, all lost, eight lives.

1871—Propeller Maine exploded, four lives lost.

1873—Steamer Bavarian burned, twenty lives lost.

1875—Schooner J. G. Jenkins foundered, all lost, nine lives.

1876—Schooner Maggie Hunter foundered, all lost, seven lives.

1879—Schooner Pinto foundered, four lives lost.

1880—Schooner Northman foundered, all lost, eight lives; schooner Olive Branch foundered, all lost, nine lives; schooner Belle Sheridan foundered, nine lives lost; propeller Zealand foundered, all lost, nineteen lives; schooner Norway foundered, eight lives lost.

1882—Schooner H. Folger wrecked, seven lives lost.

1883—Barge Milwaukee foundered, four lives lost.

The foregoing makes a total of 672 lives lost from causes above noted. Numerous other casualties have occurred from like causes which were noted in a former letter.

Communication between Lake Ontario and Lake Erie was inaugurated in September, 1831, by the passage of two vessels, one an American and the other a British craft, the former the schooner George H. Boughton, the latter the Jane Ann. The Welland canal, at this period, was accessible no farther west than Port Robinson, thence by the Chippewa river, to the Niagara at Chippewa, and on to Lake Erie by towage. The event was duly celebrated by a party of gentlemen on either craft, with music and artillery, which greatly enlivened the occasion. But few, if any of them, are now living. The canal was extended to Port Maitland, on Lake Erie, in 1845, but subsequently the terminus was changed to Port Colborne, as at present, which is 1,009 miles distant from Chicago, 923 miles from Milwaukee and 240 miles from Detroit. The first vessel to arrive at Detroit from Lake Ontario was the Ariadne, Captain Pickering, in May, 1833, having on board seventy-two passengers. Her grain carrying capacity was 3,500 bushels. The entire cost of the Welland canal, when first completed, was £1,061,497 or about four millions of dollars. Various improvements have been made from time to time until, quite recently, it has been enlarged to admit the passage of a larger class of steamers and vessels. Since the first it has opened twice in the month of March, in 1871, March 28th, and in 1878, on the 14th; in the month of April on twenty different occasions, in 1859 and 1868 on the 1st, in 1867 on the 18th; in May four times, the earliest on the 2d, in 1875, and on the 5th, in 1883. Its closing is in November or December.

J. W. H.

DULUTH is very properly beginning to take some action against the various monopolies that have heretofore controlled her prosperity to her apparent harm and the following protest from a committee appointed by the chamber of commerce has been addressed to the Mayor. It involves the harbor franchise question with which the people of the great Lake Superior village are at present struggling:

First—It is the sense of the Chamber of Commerce that the grant so made by the said council is against the best interests of the village, and that the passing of said ordinance was in direct opposition to the wishes and protests of a large majority of the citizens of Duluth, for whom such grant was held in trust.

Second—The ordinance as passed makes no provision for providing a free wagon road or street over said right-of-way between Minnesota Point and Rice's Point, which is one of the chief objects of said grant, and if any carriage way should be provided over said right-of-way by said Duluth Transfer

and Dock Company, the same would be subject to toll and be forever a tax upon the inhabitants of said village.

Third—Said ordinance gives unrestricted rights to said Transfer and Dock Company to use and monopolize the streets of said village without any safeguards whatever to the rights of the village or its inhabitants.

Fourth—No permission has yet been obtained from Congress to bridge said right-of-way, and there is no pressing need for hasty action in granting said right-of-way.

Fifth—We believe that said right-of-way and franchise is the property of the inhabitants of this village and they should have a voice in the disposition of said grant.

* * * * * * *

We most solemly and earnestly protest against your signing said ordinance as mayor of the village of Duluth and would respectfully urge that you, as the reprentative of the people of Duluth and the custodian of their rights, hold the said ordinance in your hands until the citizens of Duluth have fair opportunity to maintain and enforce their legal rights.

[*Concluded from 1st page.*]

from thence on to the interminable shrieking of the steamwhistle on the rivers, which, on some occasions, is sufficient cause for a man to spring from his night moorings at home and wish he had never been born, and reminds me of a brief, though earnest conversation which took place on the dock last fall:

"Did you hear that infernal shrieking whistle last night?"

"What do you take me for, did you suppose I was dead?"

"Who first started the machinery anyhow on the lakes?"

"Don't know. Ask the old man, he can tell you. Here he comes!"

"Captain, whence originated the steamwhistle, and what boat on the lakes first introduced it?"

"The propeller Princeton, Captain Amos Pratt, was the first craft with a steam whistle, which was placed in use in 1846, and on the Missouri river in 1844. Its purpose was to be used in fogs, or on approaching landings on the lakes and rivers, but never in harbors where it is entirely unnecessary for the opening of bridges and similar purposes, for which other remedies could easily be devised and it is hoped will be ere long."

At Detroit they have been declared a nuisance, and no steamer is allowed to blow her whistle while at landings. J. W. H.

The propeller Mary, which plied last year between Detroit and Malden, will this season run on the river St. Clair in command of Captain J. P. Hodges, formerly of the Evening Star. The latter steamer will, it is stated, be sailed by Captain Wm. McKay, for many years connected with the Detroit & Cleveland line, and latterly in command of the steamer City of Detroit.

The schooner J. E. Bailey was sold at Toledo, yesterday to H. J. Pauly, of Milwaukee for $6,000.

ERIE.

Special to the Marine Record.

Some of the wise ones prophecy that the opening of navigation will not occur this season until May 1st, owing to the unusual amount of ice visible in the lake. There is ocnsiderable stir around the docks, however, and every evidence of a prosperous season for vessel owners is apparent. The docks and warehouses are being put in good condition and the elevators are receiving proper attention. The blast furnace dock will be rebuilt, under the direction of Captain Dunlap, as soon as the harbor is clear of ice.

The Anchor Line steamers Alaska, Arizona, Clarion and Juniata are receiving extensive repairs.

The schooner Gifford, lying at Reed's dock, has been chartered by Messrs. Scott & Co. for seven trips, coal up at going rates and ore down from Escanaba at $1 per ton. Captain Davis will command her.

Considerable coal is becoming visible on docks ready for shipment at the opening of navigation.

Work on the extension to the east piers is being done under the direction of Assistant Harbormaster Kingsley and Captain Parsons. They intend to build on a rock bottom.

S. L. Lynn has contracted with the city to do dredging in the slips at the rate of $7.50 per hour.

W. W. Loomis is building for E. D. Carter and Bush & Co., two fishing tugs.

EAST SAGINAW.

Special to the Marine Record.

The marine event of the season was a marriage ceremony at St. Mary's church, the contracting parties being Captain George Ryan, of the steambarge William Rudolph, and Miss Ella Edgar, daughter of Captain Edgar, who sails the barge T. H. Cahoon. The feast, which was elegant in every respect, was spread in the cabin of the Cahoon, which lies at Mason's shipyard. All unite in wishing the young people a happy and prosperous voyage.

MILWAUKEE.

Special to the Marine Record.

The Milwaukee Ship Yard Company have rebuilt the schooner Ann Maria, at a cost of about $5,000. The schooner J. B. Merrill has had a thorough overhauling. They are also rebuilding the steambarge Maggie Marshall, the cost of which will foot up some $13,000.

Captain Wm. Steed, who sailed the schooner Ann Maria last season, will sail the schooner Fearless the coming season.

Captain James Bruce will sail the schooner Ann Maria next season.

Starke Brothers' tug Welcome will have a new steel boiler 7½x16, with double firebox, which is being built by Johnson Bros. at Ferrysburg, Mich.

Starke Brothers will have a very fine dredge, which will be one of the largest and best on the lakes. The Pound Manufacturing Company, of Lockport, N. Y., are making the machinery.

Chas. Thompson, for many years a clerk on the steamer Sheboygan, has been appointed agent for the Goodrich Transportation Company at Racine to fill the vacancy caused by the resignation of G. W. Scanlan.

MARQUETTE.

A little over a month more and we shall be watching for the "first boat from below," but those "dumb motions of the spring," by which nature is supposed to give premonition of returning life, are not very distinctly perceptible in this latitude as yet. Neither does the iron mining industry show any signs of consciousness that its busy shipping season is about to open. Usually the mines begin to take on increased forces at this season, but this year nothing of the sort is doing, and spring approaches without bringing the industrial activity at the mining locations that in previous years so pleasantly heralded its coming. There is nothing in the condition of the ore market to justify the miners of this district in getting ready for a large output next summer and they are making their dispositions accordingly. The prevalent opinion now is that the district will send to market less ore this year than in 1883, though it is conceded that last year's production can easily be exceeded if a fairly strong demand should spring up by the time navigation opens.

Lake charters will rule higher this year than last, from present indications, but the mines get the benefit of a heavy reduction in ore freights by rail, the Chicago and Northwestern Company having announced a reduction to 80 cents per ton, 35 cents less than the tariff last year, which in itself represents a handsome profit. This will have to be met by the other lines competing with that road for the ore traffic of the Marquette range, and the competition gives our mines a pronounced advantage over others in the district in this important respect. The difference in lake freights between this port and Escanaba will be about ten cents per ton in favor of the latter, but the advantage of Marquette on rail freights ought to be sufficient to bring the bulk of the ore from the mines west of here, which have hitherto shipped via Escanaba, in whole or in part, one way, as the haul by rail is only about one-quarter as great.

The outlook, is therefore, very flattering for the season's business at this port, provided the market doesn't slip wholly from under us.

KINGSTON.

The marine examinations have closed, and the members of the board have gone to St. Catherines.

The St. Lawrence is said to be open below Alexandria Bay.

Captain Booth has had two offers to bring cargoes of timber from Cleveland, but the figures are too low to accept.

MANITOWOC.

Captain Leith will take command of the Erastus Corning.

The revenue cutter Andy Johnson is to have a new boiler.

Captain Thomas Riordan will sail the Cheney Ames next season.

STURGEON BAY.

The Goodrich Transportation Company has taken the preliminary steps toward foreclosing the mortgage which it held on a large tract of land on Chamber's Island. The property was purchased of the company a number of years ago by Lewis J. Day, who held it on contract. Day failed to liquidate the indebtedness, hence the proceedings on the part of the Goodrich people. The tract of land embraces about thirteen hundred acres.

It is probable that Captain Albert Kalmbach will sail the little schooner Lettie May again next season. Last season she was chartered by two or three sailors, who run her on their own account, but with such results that the owner would doubtlessly have made more money it she had remained in ordinary.

The recent cold snap has again partly covered Lake Michigan with ice, and navigation is as difficult and dangerous as at any time the present winter.

PORT STANLEY.

A large and influential meeting was held in Captain Pollock's hotel, on the 7th inst., to discuss the matter of a harbor of refuge at Port Stanley. The meeting was attended by merchants, vessel owners, master mariners and others in and around the port, St. Thomas, Detroit, London and other cities. The desirability of this place being made a good and safe harbor was the unanimous verdict, and Thomas Arkell, ex-member of parliament of St. Thomas, and Alexander Hollock, of this place, was elected a deputation to proceed to Ottawa at once and lay the matter before the government. Petitions from some of the largest marine interests on the lake from Toronto, Buffalo, Cleveland, Detroit, Windsor, Port Colborne and other ports, have been fowarded to the government, praying for this port to be made a harbor of refuge.

CHICAGO.

The directors of the Farragut Boat Club held a meeting on the 10th inst., in the office of L. B. Glover, President of the club, for the purpose of discussing matters pertaining to the erection of the new club-house. Some designs were shown, but nothing has been or can be adopted till the ground has been acquired. There are three or more lots which are offered the club, and the question of price is the one which is now being weighed. It is hoped that a lot will be decided upon before the next meeting of the club, after which various architects will submit plans for a $15,000 club-house. No action was taken at the meeting last evening.

The average rate of freight on wheat by water from Chicago to New York in 1883, was 9 cents; lake and rail, 11.6 cents; all rail, 17 cents. These figures were compiled by the secretary's office and are given authentic.

The thirteenth annual meeting of the Lumbermen's Exchange was held on the 10th inst., at the exchange rooms, No. 252 South Water street, about 125 members being present. James P. Ketcham, the president, occupied the chair. Previous to the business portion of the meeting, an elegant lunch was partaken of, prepared for the members at the instance of Mr. Addison Ballard. B. L. Anderson, on behalf of the committee sent to Springfield some months since, in the interests of the high-license law, made a final report of the work accomplished, and stated that if it had not been for the action of the exchange there would be no high-license law in the State to-day. President Ketcham made a few remarks in place of an annual address, stating that the membership of the exchange was not as large as that of last year, owing to the fact that many non-resident firms had withdrawn from membership. The financial condition of the association was in a more satisfactory condition than last year, however. The report of the Secretary showed that the total receips of forest products at Chicago during 1883 aggregated 1,897,815,000 feet of lumber, 1,185,108,000 shingles, 65,470,000 lath, 22,737 cords of wood, and 1,714,388 railroad ties. The total resources of Chicago for the year comprised 2,586,069,657 feet of lumber, and 1,459,905,000 shingles, of which 679,477,301 feet of lumber and 461,930,496 shingles remained on hand at the end of last year. The present membership of the exchange is 131, twenty-five firms having withdrawn during the year. The amount of cash on hand is $616.

The subject of the election of officers then having arisen, a lengthy discussion ensued in relation thereto. At the regular meeting last week a minority of the exchange only was present, and it was decided to elect officers for the ensuing year, and subject to the approval of the meeting. Some members desired that a new election should be had, while others wished matters to remain as before. After a number of speeches touching upon the subject had been made, the former course was decided upon. The officers of the exchange at present are as follows: President, James P. Ketcham; Vice President, W. E. Kelley; Board of Directors, B. L. Anderson, J. O. Bryant, Thad. Dean, P. G. Dodge, W. A. Fuller, Addison Ballard, N. E. Kelley, J. P. Ketcham, J. S. Fredenburg, S. K. Martin, John McCaren, Z. G. Morris, A. C. Soper; the Secretary and Treasurer will be elected at the next meeting.

DULUTH.

Although the opening of navigation is probably about two months in the future, Duluth marine men have already very generally made engagements for the coming season. The following appointments have been learned, the list of boats not being complete: Tug Eliza Williams, Captain Walter Burns, Engineer A. C. Robinson; tug Ella G. Stone, Captain Con. O'Flynn; tug T. H. Camp, Captain Antoine Paul; tug John Martin, Captain Eli Jaques, Engineer Fred Bushner; tug J. H. Upham Jr., Captain James Cole, Engineer Peter Dube; tug Amethyst, Captain Jake Hecter, Engineer Archie Kelley; tug Mollie Spencer, Captain Martin Wheeler; tug Rambler, Captain Sam Harris; tug Nellie Cotton, Captain Jack Jeffery, Engineer Simon Jeffery; propeller Agnes, Captain Munroe, Engineer F. B. Barrows; propeller R. G. Stewart, Captain Jas. Sullivan; steamer Dove, Captain Stover; tug Eviston, Captain Ed. Smith; tug Campbell, Captain Campbell; tug Hope, Captain Percy Coburn; tug Brower, Captain R. H. Palmer; propeller Queen of the Lakes, Captain Ed. Brown; Ferry Hattie Lloyd, Engineer Geo. Bellmere, captain not appointed; tug Minnie La Mont, Captain William Jeffery. The appointments for the other boats of different classes, nearly as many as those named above, are not yet learned, some not being made.

SANDUSKY.

One thousand five hundred barrels of wine await shipment by the steamer American Eagle from the islands. The steamer has all the freight she can handle for some time to come.

IRON MARKET REPORT.

CLEVELAND, March 12.

The demand for pig iron has fallen off somewhat during the week, the market ruling dull but firm. We quote:

CHARCOAL PIG IRON.

Nos. 1 and 2 Lake Superior charcoal	$23 00@24 50
Nos. 3 and 4 Lake Superior	24 00@25 00
Nos. 5 and 6 Lake Superior	23 00@25 00
Nos. 1, 2, 3, 4, 5, Selisbury	35 00@37 00
Southern charcoal	27 00@30 00

Reported by E. L. Harper & Co., Cincinnati.

The market continues in abont the same condition it has been for the past fortnight. Notwithstanding the curtailment of production of pig iron the stocks are ample for current demand, which is somewhat reduced. The prevalence of severe weather throughout the country has had a depressing effect upon business generally, and has retarded the putting in running order of the lately submerged mills and foundries of the Ohio Valley. The return of sunshine and a genial atmosphere will usher the trade into a springtime of activity and growth. The situation at present, while unsatisfactory, is not discouraging. The opening of spring trade so nearly approaching gives promise of a healthy business, and a decidedly better feeling will prevail as the season advances. Prices are well sustained except for off grade lots. We quote as prices current:

FOUNDRY.

Hanging Rock Charcoal No. 1	$22 50 to $23 50
Hanging Rock Charcoal No. 2	21 25 " 22 25
Strong Neutral Coke No. 1	18 50 " 19 00
" " " No. 2	17 50 " 18 00
American Scotch, No. 1	19 00 to 19 50

GREY FORGE.

Neutral Coke	$16 75 to $17 25
Cold Short	16 25 " 16 75

CAR WHEEL AND MALLEABLE.

Hanging Rock, strictly cold blast	$ 27 75
" " warm blast	24 00 " 24 50
Lake Superior "charcoal" all grades	24 00 " 25 00
Southern Car Wheel, strictly cold blast	26 50 " 27 50

THE VALVE-GEAR OF MARINE ENGINES.

The old-fashioned side-lever marine engine had two eccentrics, two gab-levers, and two hand-wheels. The eccentrics were loose on the shaft, in the sense that they could make a partial rotation round it until stopped in either direction by snugs. When the eccentrics were in one position the engines went ahead, when in the other they went astern. To reverse the engines the gabs in the eccentric rods were lifted off the gab-pins in the valve rocking shafts, and the valves were then raised or lowered by hand until the crank had made half a revolution, when the crank shaft turning in the eccentrics brought the snugs in contract with the driven faces on the eccentrics. The gabs dropped on the pins and the engines were reversed. The handling of large engines so fitted was slow, but only because the slide valves required much power to move them. With the aid of modern appliances the valve could be handled with the greatest ease and rapidity.

The modern compound engine has five eccentrics, three links, reversing wheel and screw, or a small steam or hydraulic engine, according to the size of the machine. Heterodox as the statement may seem, we have no hesitation in asserting that the old-fashioned method of reversing was far better than the new. In the first place, let us ask ourselves what is the object served by the link? The answer is, that its sole purpose is to enable the engines to be reversed. It must be clearly borne in mind that with compound engines it is never used as an expansion gear. Compound engines, as usually made, when of small size, have an invariable rate of expansion. Of course this would not be the case if the link were used to alter it; but as we have said it never is so used, save very rarely and for very brief periods, when the engines are slowed down. Normally the reduction in speed is effected far more easily by the throttle-valve. In large engines the fifth eccentric is employed to drive a special expansion slide; and should any alteration be required in the point of cut-off it is effected by shifting the link of this eccentric in a way too well known to need particular description. Now if it could be shown that nothing objectionable was entailed by the use of the link-motion, no more need perhaps be said on the subject. But this cannot be done. A link-motion for a compound engine is a costly affair to begin with, and it very speedily gets out of order; not to such an extent to entail any risk perhaps, but enough to spoil diagrams to some extent, and to give trouble to engineers. The die, or its equivalent, although brought right under the end of the valve spindle, is played upon by the link, and is not easily kept tight in the link. We have three distinct places to deal with, all liable to wear and become loose, viz., the joint between the eccentric rod and the link; the die, which readily becomes loose in the link; and the joint between the die and the valve rod. If the link motion were dispensed with, then there might be but one joint, that between the valve rod and the eccentric, to wear or to be attended to. There would be less noise, less lubrication, and less risk. The link would have to be held in place by rock shaft arms and a screw. Now, it is practically impossible to prevent shake in these things. The oblique action of the link on the die tends forcibly to shift the link or to bend the valve stem, and very heavy parts only can impart anything like the proper amount of rigidity. If the strain were always in one direction, it would be easy to deal with; but it is not. Even with piston-valves, the weight of the link-motion in large engines must be estimated by tons.

The fittings must be of the best possible kind, and the cost is very heavy. Two of the five eccentrics are of no more use on a voyage than a fifth wheel would be to a coach. It is not remarkable that some engineers began to think that they can get on better without the link than with it. But it is questionable whether anything more is wanted than such a modification of the old shifting eccentric as will permit the engines to be handled rapidly; and this presents not the slightest difficulty. The unlocking of the eccentric rod and the shifting of the valves, and the dropping in of the gab again, can all be done by extremely simple steam or hydraulic machinery, in no way more complex or costly than that now in use for working the link-motion. Nothing more is needed than a modification of the head-gear still employed extensively to reverse large oscillating marine engines.—*London Engineer.*

MARINE RISKS.

Among questions recently proposed to a naturalist at a dinner given by some persons interested in insurance matters was: "How do the dangerous animals of the sea—that is, those that in any way endanger life or property—compare in number with similar instances on land?" The reply, given at length, elicited curious and interesting facts.

A fisherman informed Fish Commissioner Blackford that his vessel had been struck twenty times by a sword fish. That these blows are not to be disregarded is shown by Prof. Richard Owen, who testified in court to the effect that the sword-fish strikes with the accumulated force of fifteen double-handed hammers. Its velocity being equal to that of a swivel shot, it is as dangerous in its effects as a heavy artillery projectile. This case is perhaps the only instance in which insurance has been asked for damages being done by a sword-fish. It was brought up in the court of common pleas in London. The ship Dreadnaught, classed A1 at Lloyd's having been insured against all risks at sea, sailed from Colombo to London. When several days out, the crew, in fishing, hooked a sword-fish—in itself a very unusual proceeding. The fish, which was of the genus Xiphias, our common form of the New England coast, soon broke the line, and leaped from the water a few minutes later—as the sailors thought—to see the nature of its enemy. It probably took the ship for a whale, and a short time after charged at her with such effect that she sprung aleak. The water gradually gained despite the efforts of the crew, and the ship was put back to Colombo, and from there sent to Cochin, where she was hove down, and a round hole found in her bottom running completely through the copper and all the bottom planks. Attacks from such a source were included in sea risks and the company professed willingness to pay, if it could be shown that a sword-fish did the damage. Hence the suit, in which it was shown by such witnesses as Prof. Owen and Frank Buckland that, although this was the first instance in which a sword-fish had been able to withdraw its sword, they had lateral power sufficient to enable them to "wiggle out" of the hole, and on this testimony the ship owners were paid about $2,500, the amount claimed.

In this country a similar case has never been brought into court, though accidents are extremely common. The little sloop Red Hot, used by Prof. Baird, of the Smithsonian, in the interest of the fish commission, was struck and sent to the bottom by a sword-fish; and Professor G. Browne Goode in his interesting report gives a long list of vessels that have been more or less injured in this way. The Gloucester schooner Wyoming, on a trip to the George's banks, was struck by a sword-fish at night, and with such force that the blow was felt by all on board, the sword penetrating the plank a distance of two feet where it was broken by the terrible struggles of the fish. The vessel sprang aleak and the men were kept constantly at the pumps to keep her free. The brig P. M. Tinker had a similar experience. She was eighteen days out from Rio when the crew felt a jar as if some floating object had struck the vessel, and an examination soon after showed that she had made over ten inches of water. The men were kept steadily at the pumps until off Norfolk, at which port the vessel was put in the drydock. Here a sword was found broken off below the bends, about sixteen feet abaft the forefoot. The force of this blow was enormous, the weapon penetrating the copper sheathing, a four-inch plank, then through the timbers about six inches—in all nearly a foot. In many cases the attack of the sword-fish is entirely unprovoked, but sometimes it is made in revenge or rage. Captain Dyer, a well-known sword-fisher of New Bedford, struck a fish once off Norman's Land, that turned and rushed at the boat, sending its sword through the thick planking into the iron ballast, where it broke sharp off. The most remarkable case, illustrating the force of these fishes, is that of the Plymouth whaler Fortune. When she was drydocked a sword was found that had gone through the copper sheathing, an inch-board under the sheathing, a three-inch plank of hard wood, the solid white oak timber twelve inches thick, then through another two-and-a-half-inch hard oak ceiling and finally into the head of a barrel of oil, where it remained.

The smack Evergreen, of Mystic, was struck off Hatteras by a sword-fish and began to leak so badly that they were obliged to ask another vessel to stand by and keep away for Charleston. When the vessel was laid down the sword was found to have penetrated the planking, timber and ceiling, so that an entire plank had to be taken out before she could proceed on her voyage. In fact, a large volume could be filled with similar accounts, tending to show that the sword-fish is an enemy to be respected.

The United States local inspectors who investigated the wreck of the steamer City Columbus with the loss of 75 of her 85 passengers, and 28 out of 45 of the crew, report that the backing of the engines after the ship struck was a fatal mistake. The report goes on to say: When the last course was given Mate Harding by Captain Wright, the ship was where any ordinary landsman could have taken her past the fatal rocks without chart or compass. We cannot help believing that had the special pilot been on duty no such disaster could happen on such a night. The immediate and direct cause of this disaster was the neglect of the man or men to watch the ship's course. Captain S. E. Wright was the only legal pilot on duty at the time of the disaster, and for two hours immediately preceding and for at least one hour before she struck was not at the point of duty of the pilot attending to his actual duties; and as the master, for illegally delegating the performance of the duties of pilot to those unauthorized, and for inattention to his duties as pilot, his license as master and pilot is hereby revoked. The officers of the steamer Glaucus, who sighted the wreck, and who did not go to it, as they did not think for a moment of "anyone being on or near the wreck," are not subject to any penalty.

DISEASE CURED

Without Medicine.

A Valuable Discovery for supplying Magnetism to the Human System. Electricity and Magnetism utilized as never before for Healing the Sick.

THE MAGNETON APPIANCE CO.'S

Magnetic Kidney Belt

FOR MEN IS

WARRANTED TO CURE OR MONEY REFUNDED, the following diseases without medicine:—PAIN IN THE BACK, HIPS, HEAD OR LIMBS, NERVOUS DEBILITY, LUMBAGO, GENERAL DEBILITY, RHEUMATISM, PARALYSIS, NEURALGIA, SCIATICA, DISEASES OF THE KIDNEYS, SPINAL DISEASES, TORPID LIVER, **Gout, Seminal Emissions, Impotency, Asthma, Heart Disease, Dyspepsia, Constipation; Erysipelas, Indigestion, Hernia or Rupture, Catarrh, Piles, Epilepsy, Dumb Ague, etc.**

When any debility of the **GENERATIVE ORGANS** occurs, **Lost Vitality, Lack of Nerve Force and Vigor, Wasting Weakness,** and all those **Diseases** of a personal nature, from whatever cause, the continuous stream of Magnetism permeating through the parts, must restore them to a healthy action. There is no mistake about this appliance.

TO THE LADIES:—**If you are afflicted with Lame Back, Weakness of the Spine, Falling of the Womb, Leucorrhœa, Chronic Inflammation and Ulcération of the Womb, Incidental Hemorrhage or Flooding, Painful, Suppressed and Irregular Menstruation, Barrenness, and Change of Life, this is the Best Appliance and Curative Agent known.**

For all forms of **Female Difficulties** it is unsurpassed by anything before invented, both as a curative agent and as a source of power and vitalization.

Price of either Belt with Magnetic Insoles, $10, sent by express C. O. D., and examination allowed, or by mail on receipt of price. In ordering send measure of waist, and size of shoe. Remittance can be made in currency, sent in letter at our risk.

The Magneton Garments are adapted to all ages, are worn over the under clothing, **not next to the body like the many Galvanic and Electric Humbugs advertised so extensively,** and should be taken off at night. They hold their POWER FOREVER, and are worn at all seasons of the year.

Send stamp for the "New Departure in Medical treatment **Without Medicine,**" with thousands of testimonials.

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NOTE.—Send one dollar in postage stamps or currency, in letter at our risk, with size of shoe usually worn, and try our Magnetic Insoles, and be convinced of the power residing in our other Magnetic Appliances. Positively no cold feet when they are worn, or money refunded.

CONSUMPTION.

I have a positive remedy for the above disease; by its use thousands of cases of the worst kind and of long standing have been cured. Indeed, so strong is my faith in its efficacy, that I will send TWO BOTTLES FREE, together with a VALUABLE TREATISE on this disease, to any sufferer. Give Express & P. O. address. DR. T. A. SLOCUM, 181 Pearl St., N. Y.

TRAVELERS' REGISTER.

LAKE SHORE & MICHIGAN SOUTHERN.

Commencing Sunday, November 18, at 12 o'clock noon the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper and twenty-eight minutes slower than the time heretofore in use (Columbus time) by these roads.

Eastward.	Arrive.	Depart.
Fast New York Express	*1 07 A M	*1 22 A M
N Y, B & A Express	*6 37 A M	*7 02 A M
Elyria Accommodation	†8 07 A M	
Port Clinton Accommodation	†10 37 A M	
Buffalo Accommodation	†10 37 A M	†10 52 A M
N Y & B Fast Express	*1 57 P M	*2 27 P M
Cin. & St. Louis Express		*3 37 P M
Conneaut Accommodation		4 22 A M
Nottingham [sunday only]	9 44 P M	
Night Express	†9 42 P M	†10 07 P M

Westward.	Arrive.	Depart.
Fast Limited Express	*11 55 A M	*12 05 A M
Mich Express via Sandusky	*2 22 A M	*2 37 A M
Chicago Express via "	§6 07 A M	6 32 A M
Mich Accom, Norwalk		†6 12 A M
Conneaut Accommodation	†8 12 A M	
Nottingham, [Sunday only]	4 17 P M	1 47 P M
Toledo Express via Norwalk	*12 52 P M	†3 02 P M
St Louis Ex via Sandusky	*1 02 P M	*1 25 P M
C P Ex via Norwalk	†6 02 P M	*6 32 P M
Port Clinton Accommodation		† 4 32 P M

Reference marks—* Daily, † daily, except Sunday, § daily, except Monday.

BEE LINE

Cleveland, Columbus, Cincinnati and Indianapolis Railway.

Equipment New and Comprising all Modern Improvements.

☞Tickets by this popular route for sale at all regular Ticket Offices.

E. B. THOMAS, General Manager. **O. B. SKINNER,** Traffic Manager.

A. J. SMITH, General Passenger Agent.

CLEVELAND, OHIO.

CLEVELAND, COLUMBUS, CINCINNATI & INDIANAPOLIS.

Commencing Sunday, November 18th, trains of the Bee Line—Cleveland, Columbus, Cincinnati & Indianapolis Railway—will leave and arrive at Cleveland as follows, CENTRAL STANDARD TIME, 33 minutes slower than Cleveland time:

	Depart
No. 1, Cincinnati & Columbus Express	*7:30 A M
No. 11, Indianapolis & Wheeling Express	6:40 A M
No. 17, Special Columbus & Cincinnati Ex.	1:20 P M
No. 3, Special Ind & St. Louis Express	*1:40 P M
No. 5, Col. Cin., Ind. & St. Louis Express	*6:40 P M
No. 7, Gallion & C.L & W. Acc	4:30 P M
	Arrive.
No. 2, Col. & Cin. & Ind. Express	*6:40 A M
No. 8, Gallion & C. L. & W. Acc	9:10 A M
No 12, St. Louis & Indianapolis Express	*2:50 P M
No. 6, Col. Cin. & Indianapolis Express	9:55 P M
No. 4, Columbus & Cincinnati Express	*3:20 P M
No. 10, Wheeling Express	6:45 P M
No. 14, Col., Cin & N. Y. Fast Line	1:10 A M

Trains marked * daily, all other trains daily except Sunday.

New York, Pennsylvania & Ohio R. R.

NEW YORK, BOSTON AND THE EAST.

The Shortest and Quickest Route to Pittsburg, Washington and Baltimore and the Southeast.

Central or Ninetieth Meridien time, 33 minutes slower than Cleveland city time.

Until further notice trains will leave from the new Central Depot, South Water street and Viaduct as follows:

6.50 a. m. ATLANTIC EXPRESS—(Daily) Pullman sleeping and hotel coaches from Leavittsburgh 8:35 a. m. to New York, Albany and Boston without change. Arrive at Meadville at 10:40 a. m. (dinner) Franklin at 12:08 p. m, Oil City 12:30 p. m, Corry 12.35 p. m, Jamestown (Lake Chautauqua) 1.35 p. m, Buffalo 5:50 p. m. Rochester 8:20 p. m.; Hornellsville 6:00 p m. [supper]; Corning 7:25 p. m. Elmira 8:05 p m. Binghanton 10:05 p. m., Albany 5:00 a. m. Boston 1:45 p. m.; arriving at New York 6:15 a.m.

2.20 p. m. LIMITED EXPRESS—Through Pullman sleeping coach from Cleveland to New York. Arrives at Meadville at 6:30 p. m, Jamestown 8:47 p. m., Salamanca 9:45 p. m., New York 10:10 a. m.

11:00 p. m. NIGHT EXPRESS—(Daily except Sunday) Seeping coach from Cleveland Hornellsville. Arrive at Youngstown at 1:50 a. m., Meadville 3:25 a. m., Corry 4:59 a. m. Jamestown 5,57 a. m, Buffalo 9:20 a. m., Rochester 12:58 p, m., Hornellsville, 11:00 a m, Corning 12:07 p m, Elmira 12:40 p. m., Binghampton 2:19 p m., New York 9:10 p m. Arrive at Pittsburgh 5:50 a m., without change.

2.20 p. m. PITTSBURGH EXPRESS — Daily — Through without change, Parlor car attached. Arrives at Youngstown 5:00 p m., Pittsburg 8:02 p. m., Washington 7:09 a. m, Baltimore 8:19 a. m.

4:11 p. m. MAHONING ACOMODATION — Stopping at all way stations, arriving at Youngstown 6:55 p. m., Sharon 8:01 p. m., Sharpesville 8:10 p. m.

6:50 a. m. PITTSBURGH EXPRESS — Daily — Through without change. Arrives at Youngstown 9.30 a. m., Sharon 10:30 a. m., Sharpsville 10:40 a. m., Pittsburgh 12 45 p m., Returning, leaves Pittsburgh at 4:15 a. m., 7:45 a. m., 12:55 p. m., and 3:45 p m.

10 35 a m. YOUNGSTOWN AND PITTSBURGH ACOMMODATION—Stopping at all Way stations, arriving at Youngstown 1:40 p. m., Pittsburgh, 5.45 p. m.

Trains arrive at Cleveland, 6:15 a. m., 6:30 p. m., 10.20 a m; 1:05 p. m., and 9:45 p. m.

☞This is the only route by which passengers can reach Corry Elmira, Binghampton, New York City and intermediate points without change. No change to Boston and New England Cities.

Baggage checked through to all points East

Through tickets and information regarding the route can be obtained at the office 131 Bank street, and at new Depot of N. Y., P & O R R., South Water street and Viaduct, Cleveland, O.

A. E. CLARK, Gen'l Pass'r Ag't Cleveland, O.
J. M FERRIS, Gen'l Man'gr, Cleveland, O.
M. L. FOUTS, Passenger Agt, 131 Bank St. Cleveland.

The Nickel Plate!

NEW YORK, CHICAGO & ST. LOUIS RAILWAY.

The passenger equipment of this New Trunk Line is all new and is supplied with the latest appliances necessary to safe speedy and comfortable travel.

At Chicago, passenger trains arrive at and leave from the Union Depot, Van Buren street.

Following is the time in effect Nov. 18, 1883, and until further notice:

GOING EAST.

Lv.	Chicago	7.47 a. m.		
Arr.	Valparaiso	9.37 "		
"	Fort Wayne.	1.00 p. m.		
"	New Haven..	1.35 "		
"	West Leipsic.	3.45 "		
"	Arcadia	4.44 "		
"	Fostoria	4.57 "		
"	Green Springs	5.44 "		
"	Bellevue	6.12 "		
Lv.	Bellevue	6.22 "	7.52 a. m.	
Arr	Cleveland	9.02 "	10.22 "	Accom.
Lv.	Cleveland		10.27 "	3.52 p. m
Arr	Painesville		11.33 "	5:06 "
"	Ashtabula		12 25 p. m.	6.03
"	Conneaut		1.07 "	6.32 "
"	Erie		2.09 "	
"	Dunkirk		3.47 "	
"	Buffalo		5.22 "	

GOING WEST.

Lv	Buffalo	9.47 a. m.		
Arr	Dunkirk	11.24 "		Leave
"	Erie	1.23 p. m.		6.17a. m.
"	Conneaut	2.17 "		6.46 "
"	Ashtabula	2.50 "		7 43 "
"	Painesville	3.44 "		8.57 "
"	Cleveland	4.52 "		
Lv	Cleveland	4.57 "	6.47 a. m.	
Arr	Bellevue	7.37 "	9.17 "	
Lv	Bellevue		9.22 "	
"	Green Springs.		9.44 "	
"	Fostoria		10.22 "	
"	Arcadia		10 34 "	
"	West Leipsic		11.30 "	
"	New Haven		1 35 p. m.	
"	Fort Wayne		1.52 "	
"	Valpraiso		5.55 "	
"	Chicago		7.52 "	

Trains run by the Ninetieth Meridian Time, which is nine minutes slower than Chicago time, twenty-eight minutes slower than Columbus time, thirty-three minutes slower than Cleveland time, forty-four minutes slower than Buffalo time, and sixty minutes slower than the Seventp-fifth Meridien time.

For information, call on nearest agent of the Company, or address

B. F. HORNER, Gen'l Passenger Agent,
LEWIS WILLIAMS, General Manager. Cleveland, O.

Rocky River Accommodation departs at 6:20 a. m and 2:15 p m.

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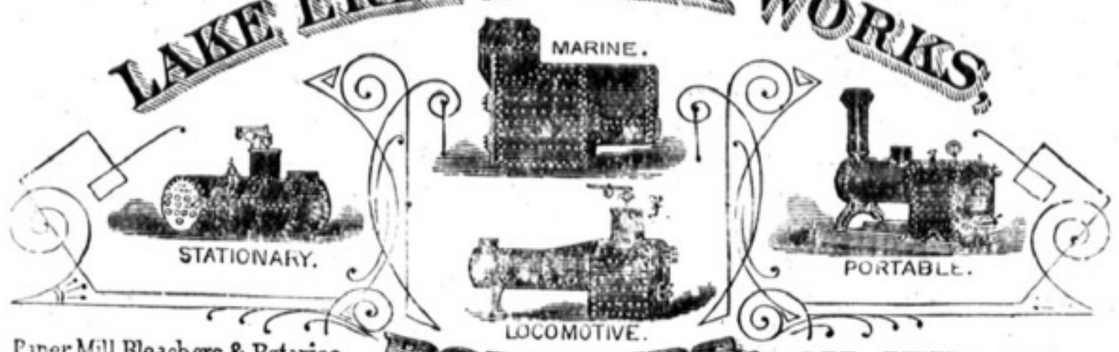

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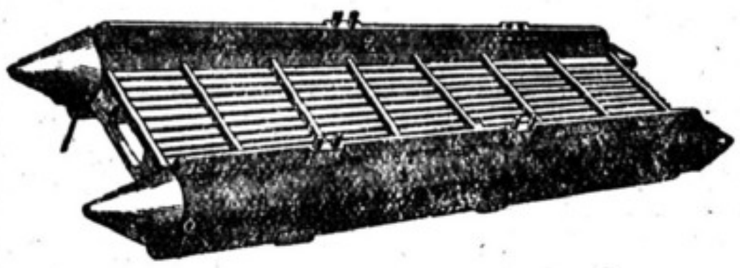

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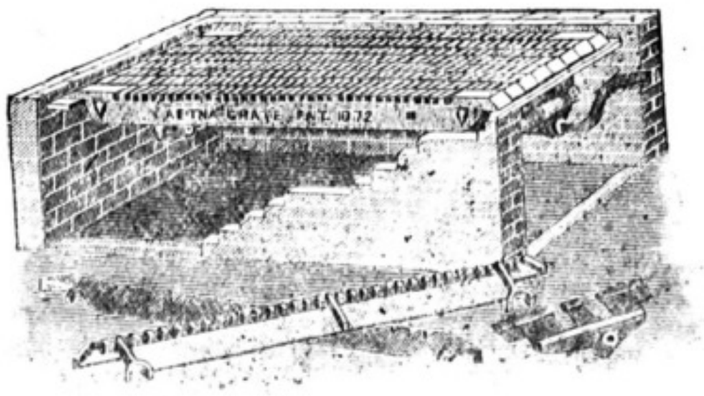

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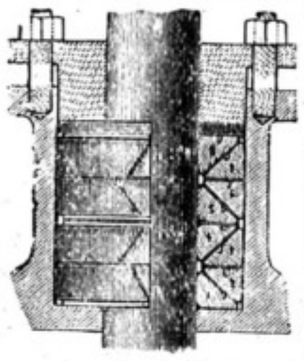

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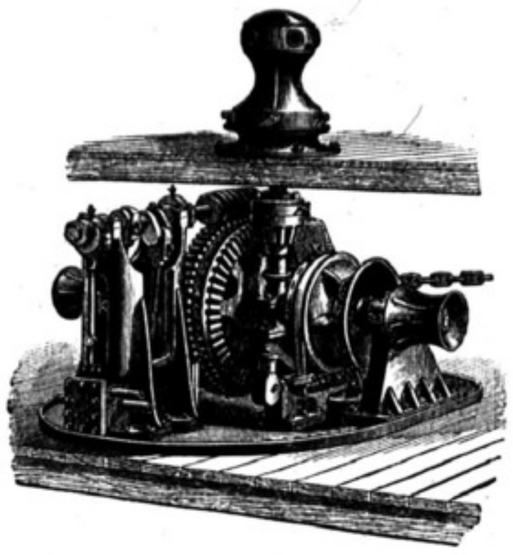
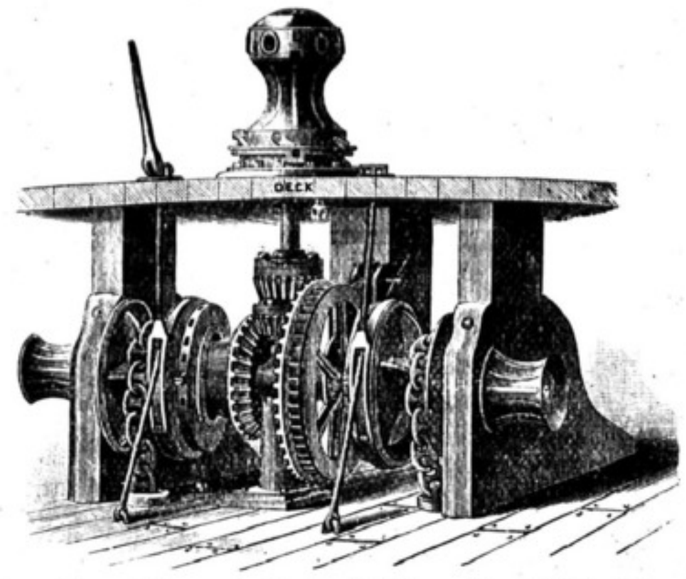


The Providence Patent Steam Capstan Windlass New Style.



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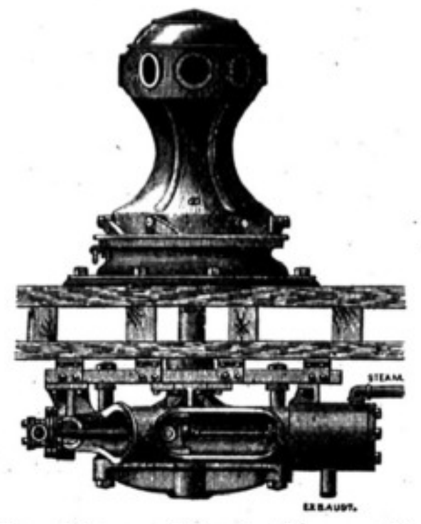
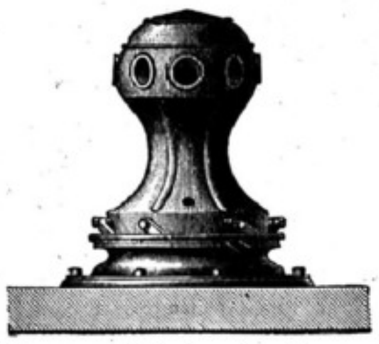
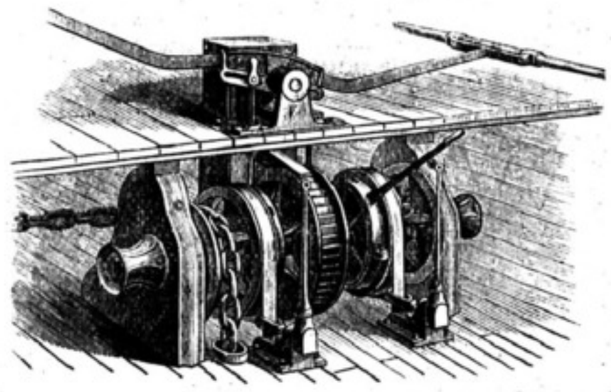


The Providence Patent Steam Capstan.



The Providence Patent Power Capstan.



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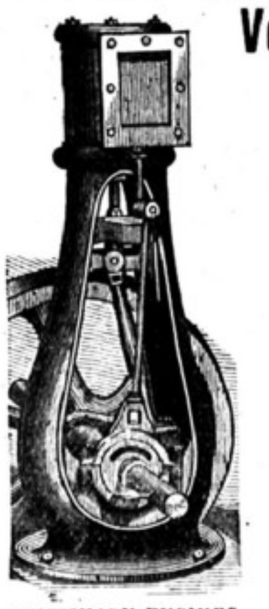

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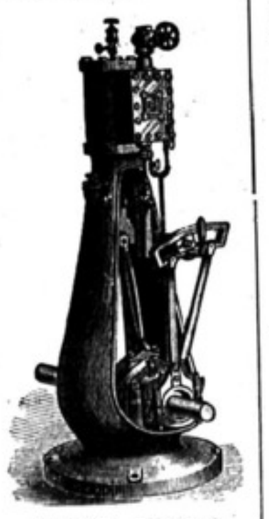

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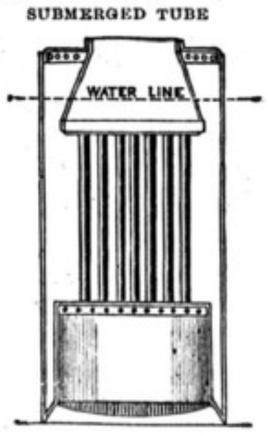

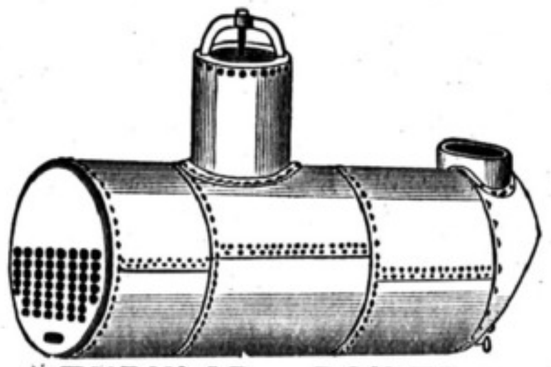

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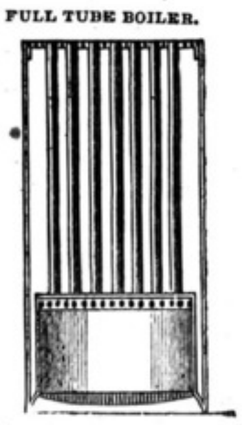

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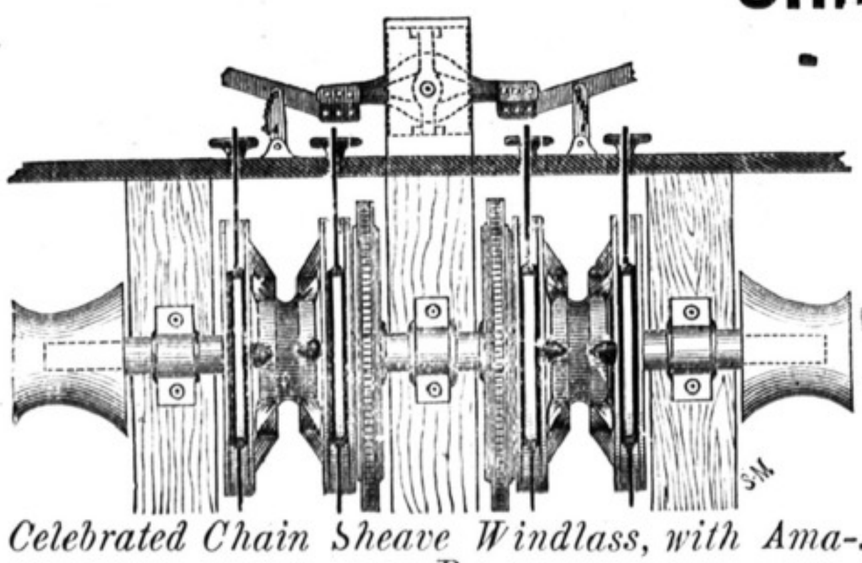
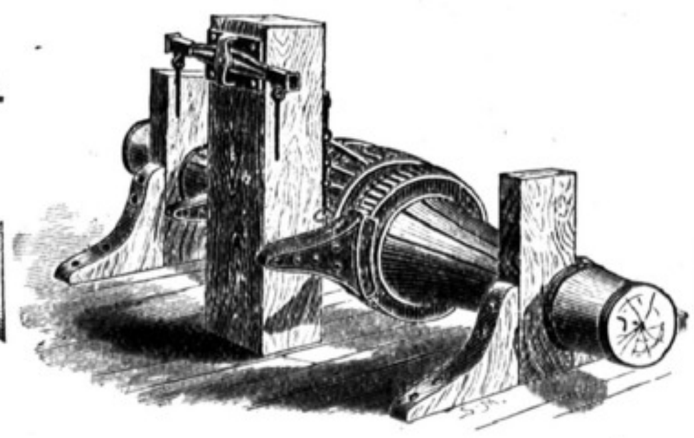
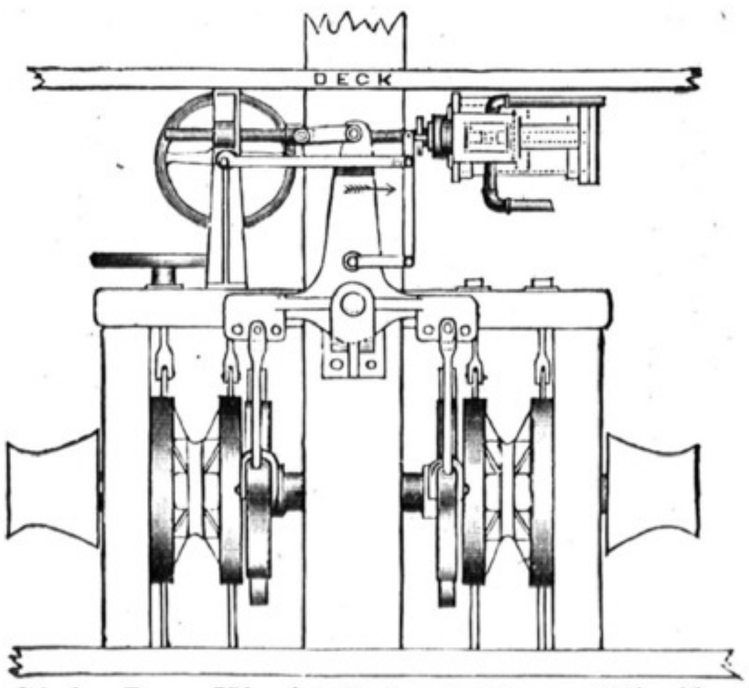


Celebrated Chain Sheave Windlass, with Amazeen Beam.



The Common Patent Windlass.



Globe Iron Works Patent Steam Windlas